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# The American Midland Naturalist

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## The Missouri Muhlenbergias.---IV.

BY BENJAMIN FRANKLIN BUSH.

### NEW JERSEY:

- Califon, *Fisher*, September 7, 1897, U. S. Herb. No. 952450;  
Califon, *Fisher*, September 7, 1897, U. S. Herb. No. 647188;  
Califon, *Fisher*, September 7, 1897, U. S. Herb. No. 733809;  
Cranberry Lake, *Mackenzie* 2434, September 16, 1906;  
Sussex County, *Mackenzie* 2434, September 16, 1906, M. B.  
G. Herb. No. 75667.

### PENNSYLVANIA:

- Dillerville, *Porter*, September 16, 1859, U. S. Herb. No.  
952451;  
Lancaster, *Small*, September 24, 1889, U. S. Herb. No. 746186.

### MARYLAND:

- Garrett County, *Donnell-Smith*, September 26, 1879, U. S.  
Herb. No. 822931;  
Garrett County, *Donnell-Smith*, September 26, 1879, U. S.  
Herb. No. 822932.

### VIRGINIA:

- Luray, *Steele and Steele* 125, U. S. Herb. No. 418475;  
Luray, *Steele and Steele* 125, M. B. G. Herb. No. 75586.

### INDIANA:

- Lafayette, *Dorner* 68, September 7, 1902, U. S. Herb. No.  
952461;  
Miller's, *Chase* 662, September 21, 1897, U. S. Herb. No.  
746119;  
Miller's, *Umbach* 5119, October 2, 1909, U. S. Herb. No.  
952458;  
Pine, *Umbach* 5073, September 18, 1909, U. S. Herb. No.  
952459;

Pine, *Umbach*, September 13, 1897, U. S. Herb. No. 351222;  
 Tolleston, *Chase* 334, September 23, 1898, U. S. Herb. No.  
 746120;  
 Tolleston, *Chase* 334, September 23, 1898, U. Ill. Herb.;  
 Tolleston, *Chase* 334, September 23, 1898, M. B. G. Herb.  
 No. 75590;  
 Wells County, *Deam*, September 15, 1901, U. S. Herb. No.  
 952460.

## KENTUCKY:

Without definite locality, *Short*, 1840, M. B. G. Herb. No.  
 75649.

## ILLINOIS:

Algonquin, *Nason*, August 27, 1879, U. S. A. Herb.;  
 Apple River, *Pepoon* 611, August 18, 1908, U. Ill. Herb.;  
 Athens, *Hall* 1888, U. S. Herb. No. 952505;  
 Champaign County, *Burrill*, October, 1871, U. Ill. Herb.;  
 Joliet, *Skeels* 553, September 28, 1904, U. S. Herb. No. 952462;  
 Joliet, *Skeels* 553, September 28, 1904, U. S. Herb. No. 746122;  
 Joliet, *Skeels* 553, September 28, 1904, U. S. Herb. No. 646206;  
 Lewistown, *Pepoon*, August 1890, M. B. G. Herb. No. 767489;  
 Oregon, *Waite*, August 17, 1885, U. S. Herb. No. 490959;  
 Rockford, *Bebb*, date not given, U. S. Herb. No. 952453;  
 Without definite locality, *Ball*, date not given, U. S. Herb.  
 No. 682507;  
 Without definite locality, *Gandoger*, 1904, M. B. G. Herb. No.  
 713648;  
 Without definite locality, *Wolf*, 1880, U. S. Herb. No. 952457;  
 Without definite locality, *Wolf*, 1881, U. S. Herb. No. 952455;  
 Without definite locality, *Wolf*, date not given, U. S. Herb. No.  
 952456.

## NORTH CAROLINA:

Buncombe County, *Bilimore Herbarium* 657a, U. S. Herb. No.  
 335375.

## MICHIGAN:

Cassville, *Dodge*, September 9, 1910, U. S. Herb. No. 952467;  
 Grindstone City, *Dodge*, September 1, 1912, U. S. Herb. No.  
 730523;  
 Imlay City, *Palmer*, September, 1880, U. S. Herb. No. 952465;  
 Port Austin, *Ball*, September 20, 1902, U. S. Herb. No.  
 952466.

## IOWA:

- Ames, *Ball* 115, August 5, 1896, M. B. G. Herb. No. 75618;  
Ames, *Pammel* 114, August 8, 1896, M. B. G. Herb. No.  
75617;  
Clinton, *Pammel* 251, September 4, 1896, M. B. G. Herb. No.  
75619;  
Iowa City, *Hitchcock*, 1888, M. B. G. Herb. No. 75585;  
Muscatine County, *Pammel* and *Reppert*, 1861, September  
10, 1898, M. B. G. Herb. No. 79770;  
Sheldahl, *Pammel*, *Hume* and *Sample* 1422, M. B. G. Herb.  
No. 75992;  
Sheldahl, *Pammel*, *Hume* and *Sample* 1422, M. B. G. Herb.  
No. 75594.

## WISCONSIN:

- Left Foot Lake, *Schuette*, August 31, 1883, U. S. Herb. No.  
751731;  
Milwaukee, *Chase* 1948, August 11, 1902, U. S. Herb. No.  
746118;  
Williams Bay, *Umbach* 4696, September 2, 1909, U. S. Herb.  
No. 952460;  
Williams Bay, *Umbach* 4721, September 3, 1909, U. S. Herb.  
No. 952463.

## MINNESOTA:

- Battle Lake, *Sheldon*, August, 1892, U. S. Herb. No. 952444;  
Fergus Falls, *Sheldon*, August, 1892, U. S. Herb. No. 952445;  
Fort Snelling, *Mearns* 794, September 13, 1891, U. S. Herb.  
No. 952443;  
Groveland, *Oswald*, 1911, U. S. Herb. No. 730775.

## KANSAS:

- Kingman County, *Carleton* 549, September 30, 1891, U. S.  
Herb. No. 952442;  
Riley County, *Norton* 597, August 18, 1895, M. B. G. Herb. No.  
75615.

## NEBRASKA:

- Big Sandy Creek, *Clements* 2848, August 9, 1893, U. S. Herb.  
No. 221806;  
Central Nebraska, *Rydberg* 1686, August 12, 1893, M. B. G.  
Herb. No. 75636;  
Natteck, *Rydberg* 1756, September 11, 1893, U. S. Herb. No.  
208268;

Natteck, *Rydberg* 1764, September 13, 1893, U. S. Herb. No. 208267;

South Fork of Dismal River, *Rydberg* 1686, August 12, 1893, U. S. Herb. No. 208269;

Talmage, *Elmore* 92, August 6, 1896, U. S. Herb. No. 952441;

Thedford, *Rydberg* 1704, August 19, 1893, U. S. Herb. No. 208266.

SOUTH DAKOTA:

Bear Creek, *Over* 2335, September 1, 1913, U. S. Herb. No. 693343;

Mill City, *Griffiths* 723, August 27, 1897, U. S. Herb. No. 952448;

Huron, *Griffiths* 6, August 25, 1896, U. S. Herb. No. 952449.

NORTH DAKOTA:

Devil's Lake, *Hitchcock* 5061, U. S. Herb. No. 952447;

Devil's River, *Hitchcock* 5061, U. Ill. Herb.

MANITOBA:

Elm Park, *Macoun* 13213, August 11, 1896, U. S. Herb. No. 952488.

MISSISSIPPI:

Starkville, *Tracy* June 21, 1892, U. S. Herb. No. 952495.

NEW MEXICO:

Socono County, *Metcalfe* 359, August 3, 1903, M. B. G. Herb. No. 75637;

Socono County, *Metcalfe* 359, August 3, 1903, U. S. Herb. No. 952494;

Socono County, *Metcalfe* 359, August 3, 1903, U. S. Herb. No. 495426;

Without definite locality, *Fendler* 764, M. B. G. Herb. No. 79687.

COLORADO:

Denver, *Ward*, August 19, 1891, U. S. Herb. No. 152895.

WYOMING:

Tower, *Griffiths* 521, August 12, 1897, U. S. Herb. No. 952493.

ARIZONA:

Wilgus Creek, *Blumer* 1784, October 12, 1907, M. B. G. Herb. No. 75660;

Wilgus Creek, *Blumer*, October 20, 1907, U. S. Herb. No. 952491.

11. MUHLENBERGIA TORREYI (Kunth) Hitchcock, ined.

*Agrostis diffusa* Muhl. Gram. 64. 1817, not *Agrostis diffusa* Host. 1809.

*Agrostis sylvatica* Torr. Fl. U. S. 1: 87. 1824, not *Agrostis sylvatica* L. 1763.

*Agrostis Torreyi* Kunth. Enum. Pl. 1: 226. 1838, replacing *Agrostis sylvatica* Torrey.

*Muhlenbergia sylvatica* (Torr.) Torr. Cat. Pl. N. Y. State, 188. 1840.

*Muhlenbergia sylvatica gracilis* Scribner, trans. scans. Acad. Sci. 9: 116. 1885, not *N. gracilis* Kanth, 1829.

*Muhlenbergia umbrosa* Scribner, Rhodora 9: 20. 1907.

*Muhlenbergia umbrosa attenuata* Scribner, Rhodora 9: 21. 1907.

*Muhlenbergia sylvatica* T & G., Bush in Flora of Jackson County, Missouri, No. 861, 1885; Tracy in Flora of Missouri No. 1646, 1886; Eggert in Catalogue of Plants of Saint Louis, Missouri, 1891; Mackenzie and Bush in Manual of the Flora of Jackson County, Missouri, No. 7, 1902; Daniels in Flora of Columbia, Missouri, No. 73, 1907.

*Muhlenbergia sylvatica* Torr., Palmer in Catalogue of Plants of Jasper County, Missouri, Nos. 218 and 3187. 1916.

Me. to Dak. and southward to Missouri and Kansas, according to Scribner, l. c.

N. B. to Ont. Ia. and southward, Hitchcock in Manual.

N. B. to Ont. Minn. N. Car. Tenn. Nebr. and the Ind. Terr., Nash in Flora.

Maine to Minnesota, south to Arizona, Virginia and Texas.

#### SPECIMENS EXAMINED:

##### MAINE:

Dover, *Fernald* 528, September 3, 1894, U. S. Herb. No. 952428;

Moscow, *Chamberlain*, August 29, 1902, U. S. Herb. No. 491269;

Orono, *Knight*, September 17, 1905;

St. Francis, *Fernald* 171, August 15, 1893, M. B. G. Herb. No. 79617.

##### MASSACHUSETTS:

Essex County, *Conant*, August, 1880, U. S. Herb. No. 952429;

Essex County, *Conant*, 1880, U. S. Herb. No. 952430;

South Hadley, *Cook* 1887, U. S. Herb. No. 277075;

Without definite locality, *Chapman*, date not given, M. B. G. Herb. No. 785595.

CONNECTICUT:

Windsor, *Bissell*, September 16, 1906, U. S. Herb. No. 952431.

NEW YORK:

Bergen, collector not given, August, 1887, U. Ill. Herb.;  
Ithaca, collector not given, August 25, 1893, M. B. G. Herb.  
No. 79737;

Lake George, *Vasey*, 1882, U. S. Herb. No. 952432;

Lake George, *Vasey*, 1882, U. S. Herb. No. 952433;

North Hannibal, *Pearce*, September 13, 1883, U. S. Herb. No.  
152900;

Pennyran, *Sartwell*, date not given, M. B. G. Herb. No. 79625,  
Wayne County, *Mackenzen*, September 16, 1870, U. S. Herb.  
No. 822959.

NEW JERSEY:

Hoboken, collector and date not given, M. B. G. Herb. No.  
79654;

Hoboken, collector and date not given, M. B. G. Herb. No.  
79626;

Stockholm, *Van Sickle*, August 1, 1895, U. S. Herb. No.  
244234.

PENNSYLVANIA:

Germantown, *Digyn*, date not given, M. B. G. Herb. No.  
79584;

Philadelphia, *Smith* 85, date not given, U. S. Herb. No. 552434;

Quakertown, *Moyer*, August, 1877, U. S. A. Herb.;

Without definite locality, *McMinn*, date not given, U. S.  
Herb. No. 952435.

MARYLAND:

Bradley Heights, *Chase* 6859, U. Ill. Herb.

OHIO:

Milan, *Moseley*, August 27, 1894, M. B. G. Herb. No. 79588.

VIRGINIA:

Sweet Springs, *Steele* 298, September 12, 1903, M. B. G. Herb.  
No. 79743.

WEST VIRGINIA:

Goose Creek, *Donnell-Smith*, September 12, 1879, U. S. Herb.  
No. 822961;

Goose Creek, *Donnell-Smith*, September 12, 1879, U. S. Herb. No. 822961;  
Sweet Springs, *Steele and Steele*, 298, September 12, 1903, U. S. Herb. No. 490276.

## TENNESSEE:

Cocke County, *Kearney*, September 1, 1897, U. S. Herb. No. 952427;  
Knoxville, *Ruth* 3, date not given, U. S. Herb. No. 952426;  
Suwanee, *Eggert*, September 10, 1898, M. B. G. Herb. No. 79721;  
Suwanee, *Eggert*, September 10, 1898, M. B. G. Herb. No. 79734.

## ILLINOIS:

Athens, *Hall*, September, 1874, U. S. Herb. No. 952436;  
Beardstown, *Geyer*, 1842, M. B. G. Herb. No. 79661;  
Bluffs Lake, *Eggert*, September 24, 1875, M. B. G. Herb. No. 79735;  
Edgemont, *Craig*, October 23, 1910, M. B. G. Herb. No. 82663;  
Menard County, *Hall*, date not given, U. Ill. Herb.;  
Mount Carroll, *Shimek*, October, 1891, U. S. Herb. No. 952438;  
Oquawka, *Patterson*, September, 1898, M. B. G. Herb. No. 75662;  
Peoria, *Brendel*, date not given, U. Ill. Herb.;  
Peoria, *Brendel*, date not given, U. Ill. Herb.;  
Peoria, *Brendel*, date not given, U. Ill. Herb.;  
Princeville, *Chase* 941, October 14, 1900, M. B. G. Herb. No. 79747;  
Princeville, *Chase* 941, October 14, 1900, U. S. Herb. No. 746215;  
Taylorville, *Andrews*, August 24, 1898, U. Ill. Herb.;  
Taylorville, *Andrews*, August 26, 1898, U. Ill. Herb.;  
Taylorville, *Andrews*, August 27, 1898, U. Ill. Herb.;  
Taylorville, *Andrews*, August 28, 1898, U. Ill. Herb.;  
Taylorville, *Andrews*, September 10, 1898, U. Ill. Herb.;  
Taylorville, *Andrews*, September 12, 1898, U. Ill. Herb.;  
Urbana, *Gibbs*, September, 1898, U. Ill. Herb.;  
Wabash County, *Schneck*, September 4, 1900, U. Ill. Herb.;



Without definite locality, *Andrews*, date not given, U. Ill. Herb.;

Without definite locality, *Engelmann*, date not given, M. B. G. Herb. No. 79660, in part the plant marked 3 on this sheet, but as there are 3 distinct species on this sheet, and 3 labels, it is impossible to tell which plants the labels belong to;

Without definite locality, *Wolf* 318, date not given, U. Ill. Herb.;

Without definite locality, *Wolf* 1882, U. S. Herb. No. 952437.

#### MISSOURI:

Aberdeen, *Davis*, September 24, 1911, U. S. Herb. No. 673648;

Allenton, *Letterman*, August, 1876, M. B. G. Herb. No. 772799;

Allenton, *Letterman*, September, 1892, M. B. G. Herb. No. 772902.

Bagnell, *Trelease*, September 22, 1897, M. B. G. Herb. No. 79742;

Carthage, *Palmer* 218, September 7, 1902, M. B. G. Herb. No. 756905;

Cliff Cave, *Norton*, August 26, 1899, M. B. G. Herb. No. 82694;

Columbia, *Tracy*, August 11, 1884, M. B. G. Herb. No. 79736;

Creve Coeur Lake, *Kellogg* 26, September 25, 1901, U. S. Herb. No. 950192;

Creve Coeur Lake, *Kellogg* 27, September 25, 1901, U. S. Herb. No. 750194;

Creve Coeur Lake, *Kellogg*, September 25, 1901, M. B. G. Herb. No. 79799;

Dodson, *Mackenzie*, September 26, 1896;

Gates, *Standley*, 9382, August 26, 1912, U. S. Herb. No. 688298, in part, the plant marked B on this sheet;

Ironton, *Russell*, August, 1897, M. B. G. Herb. No. 79723;

Jackson County, *Bush*, September 27, 1893, M. B. G. Herb. No. 80039;

Jefferson Barracks, *Eggert*, September 4, 1877, M. B. G. Herb. No. 767490;

Jefferson Barracks, *Eggert*, September 4, 1877, M. B. G. Herb. No. 79730;

- Jefferson Barracks, *Eggert*, September 4, 1877, M. B. G. Herb. No. 739938;  
 Jefferson Barracks, *Eggert*, September 4, 1877, M. B. G. Herb. No. 79731;  
 Jefferson Barracks, *Eggert*, September 4, 1877, M. B. G. Herb. No. 739938;  
 Jefferson Barracks, *Eggert*, September 4, 1877, M. B. G. Herb. No. 79839;  
 Jefferson Barracks, *Eggert*, September 4, 1877, N. D. Herb. No. 8388;  
 Monteer, *Bush* 4887, October 10, 1907, M. B. G. Herb. No. 79832;  
 Monteer, *Bush*, 4887, October 10, 1907;  
 Sarcoxie, *Palmer* 3187, September 18, 1910, M. B. G. Herb. No. 757392;  
 Sarcoxie, *Palmer* 3187, September 18, 1910, M. B. G. Herb. No. 79804;  
 Sibley, *Bush* 4822, August 21, 1907, M. B. G. Herb. No. 79829;  
 Sibley, *Bush* 4822, August 21, 1907, U. S. Herb. No. 590886;  
 Sibley, *Mackenzie* 548, October 2, 1901;  
 Springfield, *Standley* 8546, August 31, 1911, U. S. Herb. No. 687497;  
 St. Louis, *Eggert* 226, August 3, 1877, U. S. Herb. No. 950193;  
 Swan, *Bush* 603, September 28, 1899, U. S. Herb. No. 362266;  
 Swope Park, *Mackenzie* 427, September 13, 1901;  
 Terre Bleue Creek, *Trelease*, August 30, 1898, M. B. G. Herb. No. 79745.
- MICHIGAN:  
 Lapeer, *Dodge* 18, August 17, 1911, U. S. Herb. No. 952439.
- IOWA:  
 Ames, *Bessey* October 18, 1872, M. B. G. Herb. No. 79748;  
 Clinton, *Pammel* 250, September 4, 1896, M. B. G. Herb. No. 79616;  
 Clinton, *Pammel* 250, September 4, 1896, U. S. Herb. No. 294631;  
 Dakota City, *Pammel* 111, August 8, 1896, M. B. G. Herb. No. 79727;  
 Dakota City, *Pammel* 111, June 29, 1886, U. S. Herb. No. 952440;

Fayette County, *Fink* 461, August, 1894, U. S. Herb. No. 230547.

MINNESOTA:

St. Anthony Park, *Oswald*, 1911, U. S. Herb. No. 730777.

KANSAS:

Manhattan, *Hitchcock*, October 21, 1892, M. B. G. Herb. No. 79614;

Manhattan, *Kellerman*, 1888, U. S. Herb. No. 228628;

McFarland, *Hitchcock* 7832, October 17, 1910, U. S. Herb. No. 952401;

Riley County, *Norton* 598, September 28, 1895, M. B. G. Herb. No. 79614;

Riley County, *Norton* 598, September 28, 1895, M. B. G. Herb. No. 353374.

NEBRASKA:

Red Cloud, *Bates*, September 13, 1906, U. S. Herb. No. 559653.

ARKANSAS:

Benton County, *Plank* 60, date not given, U. S. Herb. No. 952425;

Benton County, *Plank*, Summer, 1900, M. B. G. Herb. No. 82686;

Benton County, *Plank*, Summer, 1900, M. B. G. Herb. No. 82687;

Benton County, *Plank*, Summer, 1900, M. B. G. Herb. No. 82678.

TEXAS:

Dallas County, *Reverchon* 1050, September, 1873, M. B. G. Herb. No. 80080;

Without definite locality, *Nealley* 403, 1889, U. S. Herb. No. 952424, labeled *M. umbrosa* by Scribner;

Without definite locality, *Nealley*, 1890, U. S. Herb. No. 952414;

Without definite locality, *Reverchon*, date not given, M. B. G. Herb. No. 80114;

Without definite locality, *Reverchon*, date not given, M. B. G. Herb. No. 80115;

Without definite locality, *Reverchon*, date not given, M. B. G. Herb. No. 80116;

Without definite locality, *Reverchon* 31, 1885, U. S. Herb. No.

952423, labeled *M. sylvatica* var.—and *M. Willdenovii* by Scribner;

Without definite locality, *Reverchon* 71, U. S. Herb. No. 952413, labeled *M. sylvatica* and *M. sobolifera* by Scribner, and *M. Mexicana* by Hitchcock.

#### ARIZONA:

Grapevine Cañon, *Toumey* 168, July 30, 1891, U. S. Herb. No. 952422;

Without definite locality, *McDougal*, 1891, U. S. Herb. No. 952421.

12. MUHLENBERGIA POLYSTACHYA Mackenzie and Bush, Manual of the Flora of Jackson County, Missouri, 23, 1902.

*Muhlenbergia Mexicana* Scribner, l. c., in part, not *M. Mexicana* Trin, 1824.

*Muhlenbergia Mexicana* Hitchcock in Manual in part, not *M. Mexicana* Trin. 1824.

Not mentioned by Nash in the Illustrated Flora. Missouri and Illinois to Wisconsin.

This species has been neglected or misunderstood since it was first described, and in order that my readers may see how very different it is from *M. Mexicana*, to which it has been referred by two agrostologists, I herewith present the original description;

*M. POLYSTACHYA* Mackenzie & Bush, n. sp. 2 feet high, erect, much branched; leaves 1 1-2 inches to 2 1-2 inches long, 1 line to 2 lines wide; panicles on peduncles 1 inch to 5 inches long, long-exserted, densely flowered, the lower branches separated; flowers nearly sessile, 1 line long; the glumes as in the last (*M. Mexicana*); hairs at base of flowering glume copious, 1-3 to 1-2 length of glume. Open rocky woods east of Sibley. August-October.

#### SPECIMENS EXAMINED:

##### MISSOURI:

Sibley, *Bush*, October 14, 1901;

Sibley, *Bush* 4171, October 10, 1906, U. S. Herb. No. 950396, with lemmas awned;

Sibley, *Mackenzie* 637, October 14, 1901, TYPE.

##### ILLINOIS:

Fulton County, *Wolf*, date not given, U. S. Herb. No. 952504;

Urbana, collector not given, 1876, U. Ill. Herb.;

Wady Petra, *Chase* 1268, September 23, 1906, U. S. A. Herb.;

Wady Petra, *Chase* 1268, September 23, 1906, U. S. Herb. No. 952454.

WISCONSIN:

Ashland, *Hitchcock* 5095, September 27, U. S. Herb. No. 952500;

Without definite locality, *Wood*, 1887, U. S. Herb. No. 952501;

Without definite locality, *Wood*, 1887, U. S. Herb. No. 952502.

13. MUHLENBERGIA CUSPIDATA (Torr.) Rydberg, Bull. Torr. Club, 32: 599. 1905.

*Vilfa cuspidata* Torr.; Hook. Fl. Bor. Am. 2: 238. 1840.

*Sporobolus cuspidatus* (Torr.) Wood, Bot. & Fl. 385. 1870.

*Sporobolus brevifolius* Scribner, Mem. Torr. Club. 5: 39, 1894, in small part, not *Agrostis brevifolia* Nuttall 1818, nor *Muhlenbergia brevifolia* (Nutt.) Nash.

*Sporobolus cuspidatus* (Torr.) Wood, Mackenzie and Bush in Manual of the Flora of Jackson County, Missouri, No. 4. 1902; Daniels in Flora of Columbia, Missouri, No. 81, 1907, but very doubtful, as this species is not known to get as far east in Missouri. Dr. Daniels has omitted several very common species of *Sporobolus* from his Flora, and I suspect that one of these has been mistaken for *M. cuspidata*.

Wisc. to Mo. and southward, *Hitchcock* in Manual.

Mani. to the N. W. Terr. south to Mo. and Kans., Nash in Flora.

Mani. to Alberta, south to Mo. and Kans., Nash in Illustrated Flora.

Manitoba to Wisconsin, Northern Illinois, Missouri and Colorado.

SPECIMENS EXAMINED:

ALBERTA:

Calgary, *Hitchcock* 4977, September 19-22, 1909, U. Ill. Herb.

NORTH DAKOTA:

Leeds, *Lunell*, August 20, 1906, U. Ill. Herb.

WISCONSIN:

St. Peter's River, *Thurber*, date not given, U. Ill. Herb. No. 79663.

IOWA:

Ames, *Hitchcock*, date not given M. B. G. Herb. No. 79630.

ILLINOIS:

Joliet, *Hill* 185, September 6, 1906, U. Ill. Herb.;

Joliet, *Hill* 185, October 9, 1906, U. Ill. Herb.;

Will County, *Hill*, August 16, 1912, U. S. Herb. No. 950191, all these Illinois collections a notable eastern extension of the range of this species.

## MISSOURI:

Atchison County, *Bush* 4233, August 5, 1893, U. S. Herb. No. 950190;

Cockrell, *Bush* 6479, September 23, 1911, U. S. Herb. No. 673563;

Greenwood, *Bush* 4125, September 19, 1906, U. S. Herb. No. 590408;

Jackson County, *Bush* 1879, August 24, 1891, M. B. G. Herb. No. 80043;

Watson, *Bush* 783, October 1, 1895, U. Ill. Herb.

## KANSAS:

Decatur County, collector and date not given, M. B. G. Herb. No. 79631;

Riley County, *Norton* 595, July 26, 1895, M. B. G. Herb. No. 79635.

## COLORADO:

Fort Collins, *Ball*, August 8, 1898, M. B. G. Herb. No. 82684.

## NEW MEXICO:

"Cross L," Ranch, *Griffiths* 5461, August 21-24, 1903, M. B. G. Herb. No. 79813;

"Cross L," Ranch, *Griffiths* 5518, August 21-24, 1903, M. B. G. Herb. No. 79814;

Raton Mountains, *Griffiths* 5461, August 18-19, 1903, M. B. G. Herb. No. 79815.

2. *PODOSEMUM* Desvaux, nouv. Bull. Soc. Philom. 2. 189. 1810. *Muhlenbergia* in large part of American Authors, not of Schreber, 1791.

A large genus of 40 species or more, natives of America, comprising those species with more or less open, large panicles, the branches of which are either drooping or spreading, pedicels slender or capillary, lemmas long-awned, or occasionally short-awned or awnless.<sup>1</sup> A single species occurs in our territory.

<sup>1</sup>The center of abundance of *PODOSEMUM* species seems to be in Western Texas, to which region *P. capillare* does not appear to extend, it being the center of a group of three species belonging to the South Atlantic region. In a subsequent paper I shall discuss some of the many allies of *P. capillare*.

1. *PODOSEMUM CAPILLARE* (Lamarck) Desv. Nouv. Bull. Soc. Philom. 2: 188. 1810.

*Stipa capillaris* Lam. Tabl. Encycl. 1: 158. 1791.

*Muhlenbergia capillaris* (Lam.) Trin. Gram. Unifl. 191. 1824.

*Muhlenbergia filipes* Chapman, Fl. S. U. S. 603, 1897, in part, not *M. FILIPES* M. A. Curtis, 1843.

*Muhlenbergia capillaris* Kunth, Tracy in Flora of Missouri, No. 1640, as from Boone County, Missouri, collected by Galloway, but not given by Daniels in his Flora of Columbia, Missouri, 1907, and no specimens known from north of the Missouri River.

*Muhlenbergia capillaris* (Lam.) Trin., Palmer in Catalogue Plants of Jasper County, Missouri, No. 2828, 1916.

Central Texas to Fla. and Va., according to Dewey in Manual of the Plants of Western Texas.

Mass. to Fla. west to Mo. and Texas, Hitchcock in Manual.

Mass. N. J. and Mo. to Fla. the Ind. Terr. and Texas, Nash in Flora.

Mass. to Kans. Fla. and Texas, Nash in Illustrated Flora.

New Jersey southward along the coast to Florida, west to Texas, and in the interior to Tennessee, Kentucky, Illinois, Southern Missouri and Oklahoma, therefore being largely a coast species; no specimens have been seen from east of New Jersey or west of Eastern Texas.

#### SPECIMENS EXAMINED:

##### NEW JERSEY:

Atlantic County, *C. A. Gross*, September 3, 1897;

Millburn, *Mackenzie* 580, September 20, 1903;

Sussex County, *Mackenzie* 1121, September 25, 1904.

##### MARYLAND:

Glen Echo, *Steele*, September 25, 1904, U. S. A. Herb.;

Great Falls of the Potomac, *Ball* 72, September 4, 1899, M.

B. G. Herb. No. 79791.

##### DISTRICT OF COLUMBIA:

Great Falls of the Potomac, *Holm*, October 13, 1898, M. B.

G. Herb. No. 779209;

Washington, *Ward*, September, 1875, M. B. G. Herb. No. 75887.

##### VIRGINIA:

Bedford County, *Curtiss*, September, M. B. G. Herb. No. 772781;

Bedford County, *Curtiss*, September 1-20, 1873, M. B. G. Herb. No. 79774.

## NORTH CAROLINA:

Biltmore, *Biltmore Herbarium* 656a, September 13, 1898, M. B. G. Herb. No. 79795;

Without definite locality, *Curtis*, date not given, M. B. G. Herb. No. 79651;

Without definite locality, *Curtis*, date not given, M. B. G. Herb. No. 80007.

## GEORGIA:

Leslie, *Harper* 1723, October 8, 1902, M. B. G. Herb. No. 79786.

## ALABAMA:

Mobile, *Mohr*, September, 1893, M. B. G. Herb. No. 79782.

## FLORIDA:

Duval County, *Curtiss* 3401, September, M. B. G. Herb. No. 79775;

Gainesville, *Chase* 4269, September 30 to October 3, 1901, U. S. A. Herb.;

Jacksonville, *Curtiss* 3401, September, M. B. G. Herb. No. 80002;

Jacksonville, *Curtiss* 4049, October 6, 1893, M. B. G. Herb. No. 767219;

Jacksonville, *Curtiss* 4050, October 16, 1893, M. B. G. Herb. No. 767200;

Lake City, *Bitting* 785, September 8, 1892, M. B. G. Herb. No. 79796;

Lee County, *Gandoger*, September, 1900, M. B. G. Herb. No. 713891;

Sanibel, *Hitchcock* 466, July, August, 1900, M. B. G. Herb. No. 79789;

Without definite locality, collector and date not given, M. B. G. Herb. No. 79995;

## MISSISSIPPI:

Biloxi, *Earle*, October 8, 1897, U. Ill. Herb.;

Biloxi, *Earle*, October 8, 1897, M. B. G. Herb. No. 79795;

Biloxi, *Tracy* 4637, October 4, 1898, M. B. G. Herb. No. 79794.



## LOUISIANA:

Red River, *Hale*, date not given, M. B. G. Herb. No. 79601;  
Without definite locality, *Hale*, date not given, M. B. G. Herb.  
No. 79699.

## TENNESSEE:

Knoxville, *Ruth*, September, 1892, M. B. G. Herb. No. 773048;  
Knoxville, *Ruth* October 6, 1894, M. B. G. Herb. No. 80093;  
Knoxville, *Ruth*, October 6, 1894, U. Ill. Herb.;  
Knoxville, *Ruth*, October, 1895, M. B. G. Herb. No. 79780;  
Knoxville, *Ruth*, October, 1897;  
Knoxville, *Ruth* 58, September, 1898, M. B. G. Herb. No.  
79785;  
Knoxville, *Ruth*, October, 1900;  
Sharp Gap, *Ruth*, September, 1890, M. B. G. Herb. No.  
773069.

## KENTUCKY:

Without definite locality, collector and date not given, M.  
B. G. Herb. No. 79592.

## ILLINOIS:

Union County, *Seymour*, 1881, U. Ill. Herb.

## MISSOURI:

Eagle Rock, *Bush* 378, September 18, 1896, M. B. G. Herb.  
No. 80051;  
Eagle Rock, *Bush* 378, September 18, 1896, M. B. G. Herb.  
No. 80118;  
Eagle Rock, *Bush* 378, September 18, 1896, M. B. G. Herb.  
No. 294602;  
Eagle Rock, *Mackenzie*, September 18, 1896;  
Joplin, *Palmer* 2828, October 11, 1909, M. B. G. Herb. No.  
756897;  
Joplin, *Palmer* 2828, October 11, 1909, M. B. G. Herb. No.  
756898;  
McDonald County, *Bush*, September 1, 1893, M. B. G. Herb.  
No. 756898;  
Monteer, *Bush* 5123, September 10, 1908, M. B. G. Herb. No.  
756898;  
Monteer, *Bush* 5123, September 10, 1908, M. B. G. Herb. No.  
80057;

Monteer, *Bush* 5123, September 10, 1908, M. B. G. Herb. No. 606505;

Swan, *Bush* 642, September 29, 1899, M. B. G. Herb. No. 79776;

OKLAHOMA:

Fonts, *Blankenship* August 28, 1895, M. B. G. Herb. No. 79784;

Sapulpa, *Bush* 767, September 20, 1894, M. B. G. Herb. No. 80003.

TEXAS:

Bowie County, *Eggert* August 27, 1898, M. B. G. Herb. No. 79781;

College Station, *Nealley*, date not given, M. B. G. Herb. No. 79890;

Columbia, *Bush* 1546, October 17, 1900, M. B. G. Herb. No. 79788;

Corsicana, *Reverchon* 3540, September 27, 1902, M. B. G. Herb. No. 79888;

Corsicana, *Reverchon* 3540, September 27, 1902, M. B. G. Herb. No. 79777;

Corsicana, *Reverchon* 3540, September 27, 1902, M. B. G. Herb. No. 79783;

Corsicana, *Reverchon* 3540, September 27, 1902;

Grand Saline, *Reverchon* 2253, October 18, 1900, M. B. G. Herb. No. 79790;

Grand Saline, *Reverchon* 2253, October 18, 1900, M. B. G. Herb. No. 79779;

Grand Saline, *Reverchon* 2253, October 18, 1900, M. B. G. Herb. No. 80070;

Polytechnic, *Ruth* 268, October 2, 1911, M. B. G. Herb. No. 710101;

Sheldon, *Reverchon* 4109, September 6, 1903, M. B. G. Herb. No. 79778;

Sheldon, *Reverchon* 4109, September 6, 1903, M. B. G. Herb. No. 79889;

Without definite locality, *Drummond* 344, date not given, M. B. G. Herb. No. 79994.